

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

**Claims 1 and 3 – are rejected under 35 U.S.C. 103(a) as being unpatentable over Chinese Utility Model Patent (CN 2197409Y) in view of Chinese Patent (CN2368912 Y).**

Utility Model Patent (CN2197409Y) discloses a formed (from steel pieces), rigid (the welded steel panel and the steel components that get welded are "rigid", as they must resist high loads in the application) building panel comprising:

**Claim 1** - spaced apart walls (w) forming cells (c);

apertures (a) in said walls such that said walls forming each said cell include at least aperture;

a substantially planar skin (s) disposed adjacent and substantially perpendicular to said walls such that said cells are open on a side opposite said planar skin'

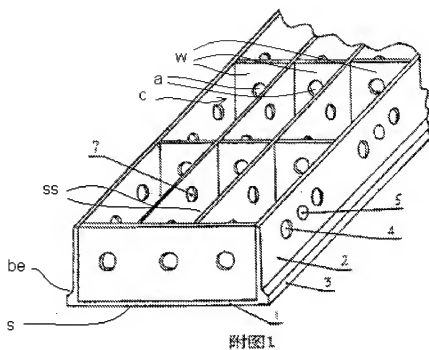
wherein the panel forms a permanent structural part of a finished wall, floor, ceiling or fence structure built using the building panel (this limitation is met at least to the extent that the assembled forms constitute a "finished structure" as broadly recited, and the "panel forms a structural part" of this finished structure in that it is an essential, integral portion thereof, and the panel is being claimed alone and the UMP panels are capable of forming a permanent part of a finished wall, floor, ceiling or fence using the

building panel since they have all of the claimed structural features, and any structure can be considered permanent until such time that it is disassembled.)

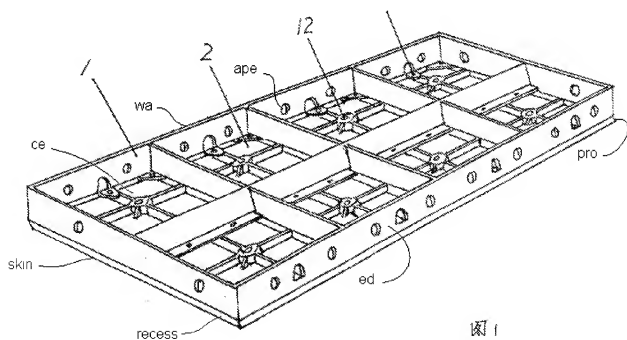
UMP does not expressly disclose a projection extending beyond at least one perimeter portion of the panel, and a recessed section along one perimeter portion of the panel, sized and shaped to receive the projection of an adjacent panel.

CP discloses a projection (pro) extending beyond at least one perimeter portion of the panel, and a recessed section (recess) along one perimeter portion of the panel, sized and shaped to receive the projection of an adjacent panel.

It would have been obvious to one of ordinary skill in the art at the time the present invention was made to combine the familiar panel of UMP with the projection/recess of CP, locating such at the short ends of the UMP panel, because it does no more than yield predictable result of allowing adjacent panels to be connected with a "tight seal between the panels" (translation page 5).



Annotated Fig. 1 (Chinese Utility Model Patent CN 2197409Y).



Annotated Fig. 1 (Chinese Patent (CN 2368912 Y))

Claim 3 – The CP-taught projection is formed by a portion of the skin.

**Claims 1-6, 8, 9, 11-23, 25, 28, and 35 - are rejected under 35 U.S.C. 103(a) as being unpatentable over Chinese Utility Model Patent in view of Scull (2,276,071).**

UMP discloses a panel comprising:

**Claim 1** - spaced apart walls (w) forming cells (c);

apertures (a) in said walls such that each of the walls forming each said cell include at least one aperture;

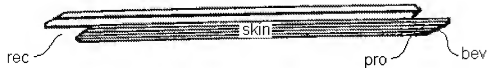
a substantially planar skin (s) disposed adjacent and substantially perpendicular to said walls such that said cells are open on a side opposite said planar skin.

UMP does not expressly disclose a projection extending beyond at least one perimeter portion of the panel, and a recessed section along one perimeter portion of the panel, sized and shaped to receive the projection of an adjacent panel.

Scull discloses a projection (pro) extending beyond at least one perimeter portion of a panel, and a recessed section (rec) along one perimeter portion of the panel, sized and shaped to receive the projection of an adjacent panel.

It would have been obvious to one of ordinary skill in the art at the time the present invention was made to combine the familiar panel of UMP with the projection/recess of Scull, locating such at the short ends of the UMP panel, because it

does no more than yield predictable result of allowing adjacent panels to be connected with a "secure interlock" (page 1, col. 1, line 43).



First Annotated Fig. 2 (U.S. Pat. 2,276,071)

Claim 2 – The projection is formed by a portion of the skin.

Claims 3 and 4 – The skin comprises a beveled edge (bev) on at least two opposite edges of the skin.

Claim 8 - The skin covers the same area as the panel, but is offset relative to the panel, forming the projection and the recessed section along one or more perimeter portions of the panel.

Claim 9 - The cells have a square cross section.

Claims 11 and 13 – The choice of material is considered an obvious matter of design choice, as Applicant has not disclosed the criticality thereof.

Claim 12 – The panel is formed from metal.

Claims 14-16 – The spaced apart walls comprise a first set of substantially parallel spaced apart walls and a second set (ss) of substantially parallel spaced apart walls, wherein said first set of spaced apart walls are substantially perpendicular to said second set of spaced apart walls, and the apertures in said substantially parallel walls are aligned.

Claim 17 - The apertures can inherently facilitate the passage therethrough of one or more of: reinforcing members, conduits, pipes, tubes, rods, cables.

Claims 18 and 19 - The panel comprises perimeter walls, which together define a rectangle.

Claim 35 – An inherently removable insert (5) in one or more of the cells.

Claims 1, 5, and 6 - UMP discloses a panel comprising:  
spaced apart walls (w) forming cells (c);  
apertures (a) in said walls such that each of the walls forming each said cell include at least one aperture;  
a substantially planar skin (s) disposed adjacent and substantially perpendicular to said walls such that said cells are open on a side opposite said planar skin.

UMP does not expressly disclose a projection extending beyond at least one perimeter portion of the panel, and a slot along a perimeter portion of the length and width of the panel, sized and shaped to receive the projection of an adjacent panel.

Scull discloses a projection (proj) extending beyond at least one perimeter portion of a panel, and a slot (slot) along a perimeter portion of the length and width of the panel, sized and shaped to receive the projection of an adjacent panel.

It would have been obvious to one of ordinary skill in the art at the time the present invention was made to combine the familiar panel of UMP with the projection/slot of Scull (a relatively shallow lengthwise slot only minimally reducing the effectiveness of the stress producing platform, and UMP teaching adjacent connected panels along this edge via the "connecting holes") because it does no more than yield predictable result of allowing adjacent panels to be connected with a "secure interlock" (page 1, col. 1, line 43).



Second Annotated Fig. 2 (U.S. Pat. 2,276,071)

Claims 20-23, 25, and 28 - are an obvious method of using the panel of Chinese Utility Model Patent modified by Scull.

Claim 24 – is rejected under 35 U.S.C. 103(a) as being unpatentable over Chinese Utility Model Patent in view of Scull and in further view of Chinese Patent CP discloses the step of bolting panels together (translation page 5).

It would have been obvious to one of ordinary skill in the art at the time the present invention was made to combine the familiar panel of UMP with the bolts of CP, because it does no more than yield predictable result of firmly securing adjacent panels at their ends.

**Claims 26, 27, and 32 – are rejected under 35 U.S.C. 103(a) as being unpatentable over Chinese Utility Model Patent in view of Scull and in further view of Bertsche (5,809,722)**

Bertsche discloses that it is old in the art to route rods (30) through aligned apertures (19) in a wall (18) in a reinforced concrete system.

It would have been obvious to one of ordinary skill in the art at the time the present invention was made to combine the familiar panel of UMP with the rods of Bertsche because it does no more than yield predictable result of securing them.

**Claim 34 – is rejected under 35 U.S.C. 103(a) as being unpatentable over Chinese Utility Model Patent in view of Scull and in further view of Aziznamini (6,871,462).**

Aziznamini discloses that it is old in the art to form U-shapes (22) on the top of a wall (19) in a reinforced concrete system.



It would have been obvious to one of ordinary skill in the art at the time the present invention was made to combine the familiar panel of UMP with the U-shapes of Aziznamini because it does no more than yield predictable result of easily securing rods.

**Claims 30, 31, and 33 – are rejected under 35 U.S.C. 103(a) as being unpatentable over Chinese Utility Model Patent modified by Scull in view of Lu (5,092,093).**

Chinese Utility Model Patent modified by Scull discloses a method of constructing a building structure as described above, but does not disclose the step of securing a second of the building panel in the orientation spaced apart from the first panel. Lu discloses coupling (with reinforcing member, 5) building panels (2,4) spaced apart, wherein cells of a first panel face cells of a second panel (Figs. 3 and 5), and introducing concrete therebetween (col. 1, line 32).

It would have been obvious to one of ordinary skill in the art at the time the present invention was made to combine the familiar panel of UMP with the spaced /coupled panels of Lu because it does no more than yield predictable result of forming a concrete wall.

**Claim 32 – is rejected under 35 U.S.C. 103(a) as being unpatentable over Chinese Utility Model Patent in view of Scull and Lu and in further view of Chinese Patent**

CP discloses the step of bolting panels together (translation page 5).

It would have been obvious to one of ordinary skill in the art at the time the present invention was made to combine the familiar panel of UMP with the bolts (which are reinforcing members as broadly recited) of CP, because it does no more than yield predictable result of firmly securing adjacent panels at their ends.

**Claims 20, 27 and 28 – is rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2000257196 in view of Mayrand (5,551,204) and Scull.**

JP discloses a method of constructing a building structure in a particular orientation from a plurality of formed, rigid building panels, each building panel comprising:

- a plurality of spaced apart walls forming a plurality of cells;
- apertures in two of the outside walls;
- a substantially planar rigid skin disposed adjacent and substantially perpendicular to said walls such that said cells are open on a side opposite said planar skin;

said method including the steps of:

- securing a first building panel in said orientation; and
- abutting a second building panel against said first building panel (Figs. 3 and 4);

wherein said building panels form structural parts of the finished building structure.

Mayrand discloses that it is old in the art to have apertures (16) in walls. It would have been obvious to one of ordinary skill in the art at the time the present invention

was made to include the Mayrand-taught apertures in all the JP walls to allow concrete to flow between the cells and lock the walls into the surrounding concrete slab.

Mayrand discloses the step of routing one or more reinforcing rod members (17) through aligned apertures of the walls.

Scull discloses a projection (pro) extending beyond at least one perimeter portion of a panel, and a recessed section (rec) along one perimeter portion of the panel, sized and shaped to receive the projection of an adjacent panel, and abutting a second building panel against said first building panel (Figs. 3 and 4) such that the projection of the first building panel and the recessed section of the second building panel overlap.

It would have been obvious to one of ordinary skill in the art at the time the present invention was made to combine the familiar panel of JP with the projection/recess of Scull, because it does no more than yield predictable result of allowing adjacent panels to be connected with a "secure interlock" (page 1, col. 1, line

#### ***Allowable Subject Matter***

Claims 29 and 36 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Response to Arguments***

Applicant's arguments have been fully considered but they are not persuasive.

Regarding the argument that the referenced panels do not form a permanent structural part of a finished wall, floor, ceiling or fence structure built using the building panel, the rejection of claim 1 addresses this argument.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **DANIEL KENNY** whose telephone number is (571)272-9951. The examiner can normally be reached on Mon-Fri. 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Dunn can be reached on (571) 272-6670. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/D. K./  
Examiner, Art Unit 3633

/Jeanette E Chapman/  
Primary Examiner, Art Unit 3633